

APPLICANT(S): ID DAN, Gavriel J.  
SERIAL NO.: 10/811,013  
FILED: March 29, 2004  
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### **REMARKS**

The present response is intended to be fully responsive to all points of objection and/or rejection raised by the Examiner and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application is respectfully requested.

Applicant asserts that the present invention is new, non-obvious and useful. Prompt consideration and allowance of the claims is respectfully requested.

### **Status of Claims**

Claims 14, 15, 17, 18, and 20-30 are pending in the application. Claims 14 and 23 have been amended. Applicant respectfully asserts that the amendments to the claims add no new matter.

### **Telephone Interviews**

Applicant wishes to thank Examiner Ramirez for attending two telephone interviews with Applicant's Representatives Caleb Pollack (the undersigned) and Yamima Eadan (Registration No. 64,764), on September 4, 2009 and September 10, 2009.

During the interviews, proposed amendments were discussed in view of the Jin reference (US Patent No. 6,776,165). No agreement was reached. The amendments discussed on September 10, 2009 are included in the amendments above (the language included in claim 23 has been adjusted for that claim).

### **CLAIM REJECTIONS**

#### **35 U.S.C. § 102 Rejection**

In the Office Action, the Examiner rejected claims 14, 15, 17, 18, 20 and 22-30 under 35 U.S.C. § 102(e), as being anticipated by US Patent No. 6,776,165 to Jin. Applicant respectfully traverses this rejection in view of the remarks that follow.

Claim 14, as amended, includes, *inter alia*:

a computer processing controller to receive data sensed by the in-vivo device relating to an in-vivo condition and, in response to the sensed data

corresponding to predetermined values, operate the magnetic field source to operate the MEMS switch to change a property of the in-vivo device.

Claim 23, as amended, includes, *inter alia*:

receiving data sensed by the in-vivo device relating to an in-vivo condition and controlling a magnetic field in response to the received sensed data corresponding to predetermined values and ... in response to the magnetic field, a ☐ MEMS switch causing a change in the operation of the in-vivo device.

In the Office Action, the Examiner cites to several sections in Jin regarding the aforementioned claim features. Applicant's claims are distinguishable from the teachings of each of these sections, and from the reference as a whole, as discussed in the remarks that follow.

In col. 4 lines 35-44, Jin teaches detecting position information using remote sensors (x-ray analysis, ultrasonic sensing, magnetic position sensing) to trigger magnets that automatically move the capsule. Each of Applicants' claims 14 and 23 is distinguishable from this teaching, as these claims describe receiving in-vivo data *sensed by the in-vivo device* (i.e., not sensed by remote sensors as in Jin) and furthermore, by operating a *MEMS switch* in response to the sensed data (in Jin, the sensed data is used to move and orient the device, but not to operate the MEMS switch).

In col. 4 lines 44-48, Jin teaches sensing pressure information using sensors on the capsule. However, Jin does not teach using the pressure information to operate a MEMS switch, but instead "to minimize the pressure on the side walls of the tract, duct or cavity". Jin does not teach how such pressure is minimized, but the pressure is certainly not minimized using MEMS switches, which in Jin are taught only to be used for releasing drugs or collecting tissue samples (See Jin, col. 3 lines 39-44).

In col. 3 lines 39-49, Jin teaches collecting tissue samples using an extendable/retractable instrument. Jin teaches "a command for biopsy action can be relayed to the MEMS capsule by remote magnetic signals or wireless RF signals" (col. 3, ll. 45-47). Jin teaches controlling the MEMS switch using remote signals but does not teach initiating these commands in response to data *sensed by the in-vivo device* as required in claims 14 and 23. Furthermore, Jin does not teach that the magnetic or RF signals relate to an in-vivo condition, which is also required in claims 14 and 23.

In col. 3 lines 58 – col. 4 line 7, Jin teaches “[i]f a mix of drugs is to be administered, a MEMS capsule with a multi-compartment structure will be commanded to do so via remote signals.” Again, Jin teaches controlling the MEMS switch using remote signals but does not teach initiating these commands in response to data *sensed by the in-vivo device or relating to an in-vivo condition* as required in claims 14 and 23.

Claim 14 also includes, *inter alia*:

a computer processing controller to receive data sensed by the in-vivo device relating to an in-vivo condition and, in response to the sensed data corresponding to predetermined values, operate the magnetic field source.

Claim 23 also includes, *inter alia*:

at a computer processor ... receiving data sensed by the in-vivo device relating to an in-vivo condition and controlling a magnetic field in response to the received sensed data corresponding to predetermined values.

In col. 3 lines 50-58, Jin teaches a programmable device including a MEMS switch. However, Jin’s device is programmed to activate the switch based on time, e.g., every 4 hours, not based on data sensed by the in-vivo device relating to an in-vivo condition as required in claims 14 and 23. In col. 3 lines 58 – col. 4 line 7, Jin teaches controlling the MEMS switch using remote signals but does not teach initiating these commands in response to data sensed by the in-vivo device or relating to an in-vivo condition as required in claims 14 and 23.

For a reference to anticipate a claim, the reference must teach each and every element of the claim. Since Jin does not teach operating a MEMS switch in response to receiving data sensed by the in-vivo device, as required in each of claims 14 and 23, Jin cannot anticipate these claims.

Applicant notes that the Examiner does not provide any reference to Jin for the limitations of the dependent claims. For example, the Examiner does not provide a reference to Jin that discloses the features that the sensor is an imager (claim 15) or that the in-vivo condition is determined based on analysis of in-vivo images (claim 30). Although Jin describes an imager, Jin does not teach, explicitly or inherently, operating a MEMS switch *in response* to image data.

While the Examiner did not reject Applicants' independent claims 14 and 23 as being obvious, Applicants note that claims 14 and 23 are not obvious in view of Jin.

As discussed above, Jin does not teach controlling a MEMS switch in response to receiving data sensed by the in-vivo device corresponding to predetermined values. However, in other embodiments, Jin does teach automatically controlling external magnets for purposes other than controlling a MEMS switch, i.e., to move or orient the device by magnetic propulsion (e.g., see Fig. 3) and to reduce pressure on the sidewalls of the GI tract (col. 3 ll. 23-29 and col. 4 ll. 44-48).

To move the device, Jin teaches using position information sensed by sensors external to the capsule (x-ray analysis, ultrasonic sensing, magnetic position sensing) (col. 4 lines 35-44) and not sensed by the capsule itself, as required in claims 14 and 23.

The only teaching Jin provides to reduce pressure involves automatically adjusting a magnetic field *in response to data sensed by the device* (using data from pressure sensors embedded on the capsule surface) (col. 3 ll. 23-29). However, Applicants assert that the Examiner cannot combine the Jin embodiment for reducing pressure with the Jin embodiment for operating a MEMS switch in the manner necessary to make Applicants' claimed features obvious.

As discussed above, Jin only teaches using a MEMS switch for releasing drugs or collecting tissue samples. In the reference itself, Jin recognizes the problem of releasing drugs at the wrong in-vivo locations rather than at a target affected area and describes that releasing drugs at a specific location in the GI tract is "highly desirable" (col. 1, ll. 46-57). Accordingly, for the MEMS switch to operate properly the switch in Jin should be operated to release drugs and collect tissue samples at specific target locations. However, pressure within the GI tract cannot be reliably linked to specific in-vivo locations. For example, pressure may vary for each person, the time or day, food consumed, physical activity, or other factors. Furthermore, in-vivo structures separated by large distances may have the same pressure, in which case, if the MEMS switch (as described in the system of Jin, without any other improvements) were operated based on pressure information, drugs might be released or tissue samples collected in locations far distant from the desired target locations. Accordingly, the data sensed by the pressure sensor in the system of Jin cannot be used to operate the MEMS switch at the proper location, a stated goal of the Jin reference. Since

combining the Jin embodiment for operating the MEMS switch and the Jin embodiment for reducing pressure would contradict this goal, it is not proper to combine these embodiments to Applicants' make the claimed features obvious.

In addition, automatically adjusting a magnetic field to move the capsule to reduce pressure in Jin does not teach or make obvious "[changing] a *property* of the in-vivo device" (claim 14, emphasis added) or "causing a change in the *operation* of the in-vivo device" (claim 23, emphasis added).

Applicants assert that the aforementioned features of claims 14 and 23 are not inherent in Jin. Although Jin teaches a device having some of the structural components of claims 14 and 23 (e.g., a MEMS switch, a sensor, etc.), the components of Jin operate in a different manner than the corresponding claimed components. Structural components, or a processor which may be programmed, which are taught to have specific operations in Jin, cannot be extended to make inherent any conceivable operation, and in particular the operations described in claims 14 and 23.

Accordingly, Jin does not anticipate or render obvious at least the aforementioned features of independent amended claims 14 and 23, and therefore claims 14 and 23 are allowable over Jin. Each of claims 15, 17, 18, 20, 22, and 24-30 depends from one of claims 14 or 23, and is therefore likewise allowable.

Applicant therefore requests that the Examiner withdraw the rejection of claims 14, 15, 17, 18, 20 and 22-30, under 35 U.S.C. § 102(e), as being anticipated by Jin.

### **35 U.S.C. § 103 Rejection**

In the Office Action, the Examiner rejected claim 21 under 35 U.S.C. § 103(a), as being unpatentable over Jin in view of Thompson (US Patent No. 6,580,947).

For the reasons stated above, Jin does not disclose every feature of independent claim 14, on which claim 21 depends. Applicant asserts that Thompson does not cure the deficiencies of Jin. Therefore, claim 21 is likewise allowable over Jin.

Therefore, Applicant requests that the Examiner withdraw the rejection of claim 21 under 35 U.S.C. § 103(a).

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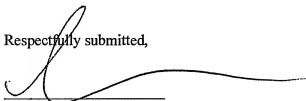
### Conclusion

In view of the foregoing amendments and remarks, Applicants assert that the pending claims are allowable. Their favorable reconsideration and allowance is respectfully requested.

Should the Examiner have any question or comment as to the form, content or entry of this Amendment, the Examiner is requested to contact the undersigned at the telephone number below. Similarly, if there are any further issues yet to be resolved to advance the prosecution of this application to issue, the Examiner is requested to telephone the undersigned counsel.

No fees are believed to be due in association with this paper. However, if any fees are due, please charge any fees associated with this paper to deposit account No. 50-3355.

Respectfully submitted,



Caleb Pollack  
Attorney/Agent for Applicant  
Registration No. 37,912

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**Pearl Cohen Zedek Latzer, LLP**  
1500 Broadway, 12th Floor  
New York, New York 10036  
Tel: (646) 878-0800  
Fax: (646) 878-0801